

IN THE CLAIMS:

Please cancel claims 12, 17-18, and 30-52 without prejudice.

Please amend claims 9, 13, 15, and 28 as follows:

1-8. (Cancelled)

9. (Currently Amended) A method for obtaining a phage particle comprising an antibody fragment directed against an antigen associated with the surface of target cells in a heterogeneous cell population, wherein said heterogeneous cell population comprises non-target cells and target cells in a heterogeneous mixture, and wherein said non-target cells and/or target cells are detectably labeled, the method comprising:

(a) providing a library of phage particles that express antibody fragments on the surface of the phage particles;

(b) incubating said library of phage particles with said heterogeneous cell population under conditions that allow binding of the antibody fragment expressed on the surface of the phage particles to said antigen associated with said target cells;

(c) separating said target cells and phage particles bound therewith from phage particles not bound to said target cells; and

(d) recovering the phage particles bound to the target cells.

10. (Previously Added) A method according to claim 9, wherein the separating of said target cells and phage particles bound therewith from phage particles not bound to said target cells is accomplished by flow cytometry.

11. (Previously Added) A method according to claim 9, further comprising isolating antibody fragments that bind to said target cells.

12. (Cancelled)

13. (Currently Amended) A method according to claim 9 ~~12~~, wherein said detectably labeled cells are labeled with a fluorescent label.

14. (Previously Added) A method according to claim 13, wherein said fluorescent label is a fluorescein label.

15. (Currently Amended) A method according to claim 9, further comprising repeating steps (b) through (d) ~~one or more times~~.

16. (Previously Added) A method according to claim 9, wherein the library of phage particles comprises phage particles expressing Fab or single chain Fv (scFv) antibody fragments.

17 and 18. (Cancelled)

19. (Previously Added) A method for obtaining a phage particle comprising an antibody fragment directed against an antigen associated with the surface of target cells, the method comprising:

C₂
(a) providing a library of phage particles that express antibody fragments on the surface of the phage particles;

(b) incubating said library of phage particles with non-target antigens;

(c) incubating said library of phage particles with said target cells, under conditions that allow binding of the antibody fragment expressed on the surface of the phage particles to said antigen associated with said target cells;

(d) separating said target cells and phage particles bound therewith from phage particles not bound by target cells; and

(e) recovering the phage particles bound to the target cells, wherein step (c) may precede step (b).

20. (Previously Added) A method according to claim 19, wherein the non-target antigens are immobilized.

21. (Previously Added) A method according to claim 20, wherein the non-target antigens are immobilized by coating a solid surface.

22. (Previously Added) A method according to claim 19, wherein the non-target antigens are associated with the surface of non-target cells.

23. (Previously Added) A method according to claim 22, wherein the separating of said target cells and phage particles bound therewith from phage particles not bound by target cells is accomplished by flow cytometry.

C₂
24. (Previously Added) A method according to claim 19, further comprising isolating antibody fragments that bind to said target cells.

25. (Previously Added) A method according to claim 23, wherein said target cells and/or said non-target cells are detectably labeled.

26. (Previously Added) A method according to claim 25, wherein said detectably labeled cells are labeled with a fluorescent label.

27. (Previously Added) A method according to claim 26, wherein the fluorochrome-labeled antibodies are phycoerythrin (PE)-labeled, peridinin chlorophyll protein (PerCP)-labeled or fluorescein isothiocyanate (FITC)-labeled.

28. (Currently Amended) A method according to claim 19, further comprising repeating steps (b) through (e) ~~one or more times~~.

29. (New) A method according to claim 19, wherein the library of phage particles comprises phage particles expressing Fab or single chain Fv (scFv) antibody fragments.

30-52. (Cancelled)
